

## Classic 脚踏开关 医疗必备

CE CCC IPX8

Meet the requirements of YY1057-2016 general technical conditions for medical foot switches



### Medical Waterproof Foot Switch

- ◆ Flame retardant reinforced engineering plastic shell, excellent material selection, novel and chic modeling, high structural strength, chemical resistance, aging resistance, impact resistance.
- ◆ Embedded marking plate, and the use function codes can be easily marked and are not easy to fall off and get fade.
- ◆ Built-in switch VV15F-01C basic type microswitch, silver alloy contacts plated with 24K gold, CE, UL, C-UL, VDE certified.
- ◆ Fatigue-free back pedal mechanism for long-time operation
- ◆ Oil resistance, waterproof and dust-proof up to IP68, in accordance with IEC/EN60529 standard
- ◆ RVV 0.5mm<sup>2</sup>x2 core x 2m cable is standard.

### General characteristics

Material	Pedal: PC Flame retardant reinforced engineering plastic Base: PC Flame retardant reinforced engineering plastics Converter Block: PC Flame retardant reinforced engineering plastics Mounting Plate: Stainless Steel	
Contact resistance	Below 50mΩ (first time)	
Insulation resistance	Above 100MΩ, 500VDC test	
Dielectric	2000VAC 1 minute	
Lifespan	Mechanical: Min. 1 million Electrical: Min. 100,000	
Ambient temperature	-25°C~+70°C (no condensation, no icing)	
Ambient Humidity	45%~85%RH	
IP rating	IP X8 IEC/EN60529	
Standard Certification	CE IEC/EN60947-5-1 CCC GB14048.5	

### Model Naming

HRF-M5 [1] [2] - [3] - [4] - [5]

#### [1] Forms of combination

None	Single pedal (1a)
2	2-pedals (2a)
3	3-pedals (2a)

#### [4] Connector

None	No connector (standard)
A	6.35mm audio connector (standard), can be customized with 3.5mm
D	DB9 connector
U	USB connector

#### [2] Pedal Color

Y	Yellow (standard color)
R	Red
B	Blue
W	White
LY	Light yellow (white base)
LB	Light blue (white base)

※M52 standard color: Yellow/Blue (left/right pedals)

#### [3] Link Block

None	Standard base
J	Standard blue link block

※ LY, LB type use white color link block

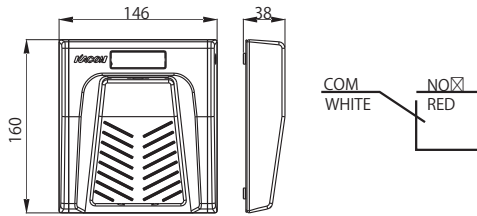
#### [5] Cable

None	0.5mm <sup>2</sup> ×2m (standard)
3	0.5mm <sup>2</sup> X 3m
5	0.5mm <sup>2</sup> X 5m

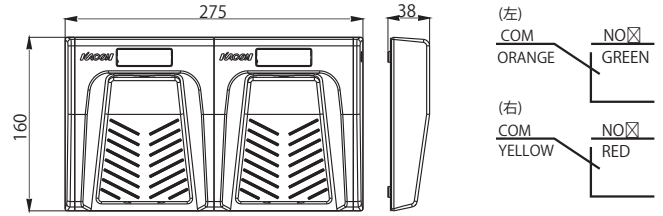
※The above designations are for selection reference only, and the parameters cannot be combined arbitrarily. Common specifications are shown in the table, if you need special customized specifications, please contact KACON.

## Dimension and Circuit

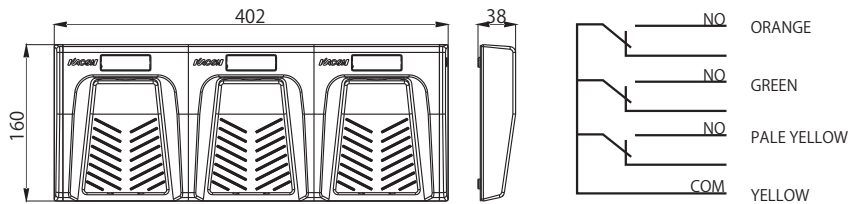
HRF-M5



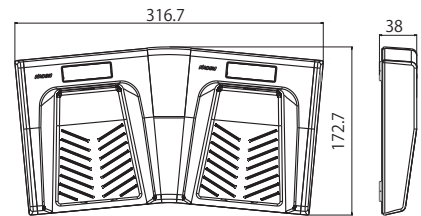
HRF-M52



HRF-M53



HRF-M52-J

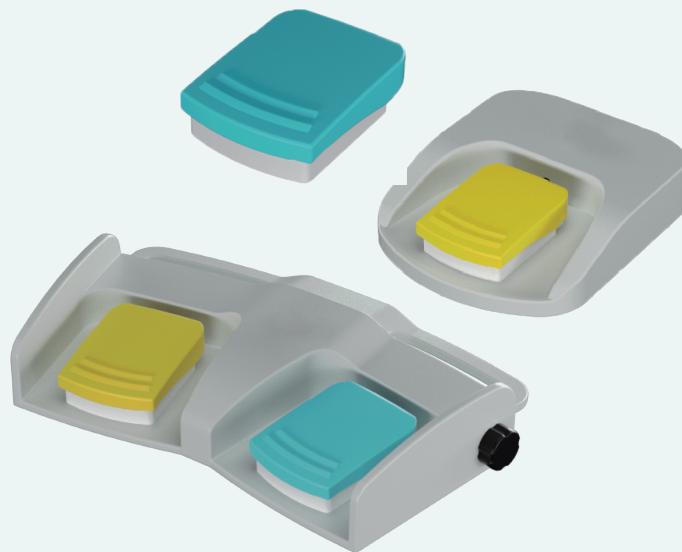


## Specification Type

Part number	Type	Built-in switch			Cable	Operation force	Weight (kg)
		Part number	Contact form	Rated current			
HRF-M5*	Standard	24K gold plated contacts waterproof micro switch	1a	8A 250VAC Resistance	RVV 0.5mm <sup>2</sup> × 2cores × 2m grey	≤10.5	0.623
HRF-M52*	2 pedals (standard)		1a each		RVV 0.5mm <sup>2</sup> × 4cores × 2m grey		1.049
HRF-M53*	3 pedals (standard)		1a each		RVV 0.5mm <sup>2</sup> × 4cores × 2m grey		1.786
HRF-M5*-A	6.3mm audio connector (customized)		1a		Per customer requirements		
HRF-M52*-A			1a each				
HRF-M5*-D	DB9 connector (customized)		1a				
HRF-M52*-D			1a each				
HRF-M53*-D			1a each				
HRF-M5*-U	USB connector (standard)		1a				
HRF-M52*-U		1a each					
HRF-M53*-U	USB connector (customized)	1a each					

## Medical Waterproof Foot Switch

- ◆ Casting aluminum alloy shell, surface baking plastic treatment, environmentally resistant, wear-resistant, aging-resistant.
- ◆ Spring-loaded cable locks are provided at the cable lead-out end, with high tensile strength and excellent protective performance.
- ◆ Various combinations to choose from.  
Analog switches dedicated to signal control.  
Waterproof microswitches - protection class up to IP67.  
A variety of interfaces to choose from: DB9, USB, aviation plug and other connectors  
The wireless model is installed with a convenient battery compartment, which saves the customer's maintenance time.
- ◆ Foot switch shell tender currant color, TIFFANY blue base medical off-white (other colors can be customized)
- ◆ Built-in waterproof microswitch, CE, UL, COC certified, contacts plated with 24K gold treatment, high load capacity, high contact reliability.
- ◆ Standard configuration RVB 0.5mm2 x 5 cores parallel well wire x 2m(black) cable.



## General Characteristics

	Micro switch	Analog switch	Wireless switch
Material	Housing: high strength engineering plastic.	Base: die-cast aluminum alloy	
Contact resistance	<25mΩ(first time)		
Electrical insulation resistance	Over 100MΩ 500VDC		
Dielectric	1 minute duration between charged bodies 1 minute between uncharged bodies	/	1 minute duration between charged bodies 1 minute between uncharged bodies
Maximum switching voltage	125V/250V	0-5V 0-10V	4.5-10V
Maximum switching current	5A/2A	0-20mA 4-20mA	≤15mA
Mechanical lifespan	Over 1 million times		
Electrical lifespan	Over 100000 times	Over 1 million times	Over 100000 times
Operation force	25N		
Ambient temperature	-25°C~+70°C (No condensation, no icing)		
Ambient humidity	45%~85%RH		
IP rating	IP X7 IEC/EN60529		
Certificate	CE IEC/EN60947-5-1	CCC GB14048.5	ROSH YY1057-2016

## Model Naming

HRF- [1] [2] [3] [4] [5] [6] - [7] [8]

### [1] Model

HD6	Metal base
HD6P	Plastic base
M3	No base

### [2] Forms of combination

None	Single pedal base
2	2-pedals base

### [3] Pedal color

Y	Yellow (standard)
B	Blue
YB	Light yellow/Tiffany blue (left/right)
K	Black
C	Grey

Other colors need to be customized, standard with light yellow

### [4] Micro motion mode

None	Default waterproof micro switch
M	Analog switch
Z	Wireless switch

### [5] Contact form

None	1NO
W	2NO

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### 6 Push button form

None	Standard w/ push button
1	Left push button
2	Mid push button
3	Right push button
4	Left + mid push button
5	Right + mid push button
6	Left + right push button
7	Left + mid + right push button

### 7 Connector

None	Standard 2m cable
P	Aviation connector
D	DB9 connector
U	USB connector

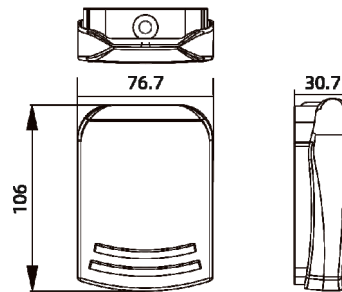
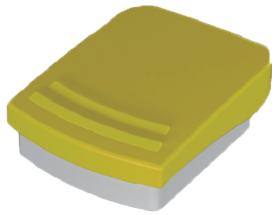
### 8 Customization

None	Any letter or number
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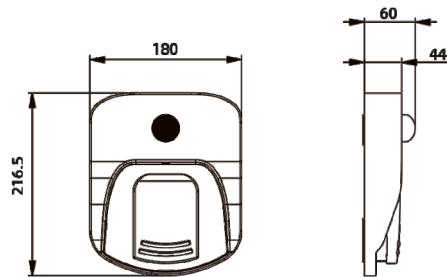
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## Dimension and Circuit

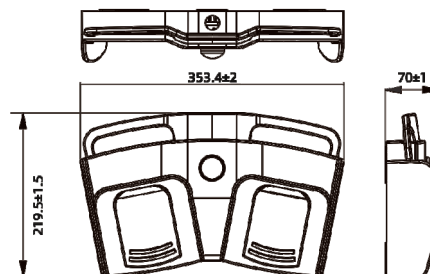
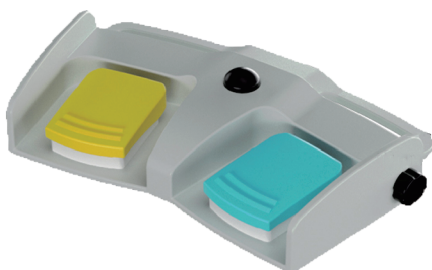
HRF-M3



HRF-HD6



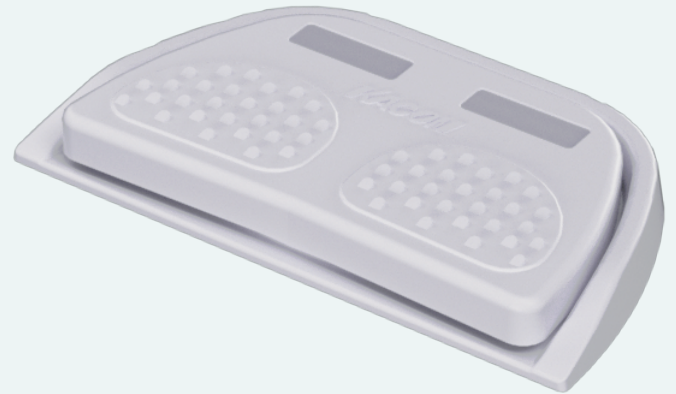
HRF-HD62





## Medical Waterproof Foot Switch

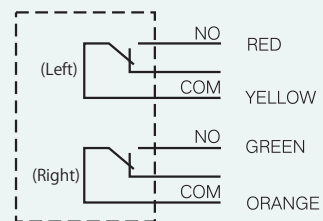
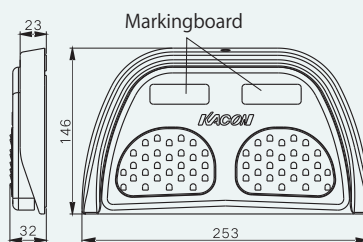
- ◆ Unique warping board type double pedal structure, used in up and down, forward and reverse: forward and backward, inverted and other motion control systems, can effectively prevent misoperation, to ensure safety.
- ◆ Flame retardant reinforced engineering plastic shell, high structural strength, aging resistance, impact resistance, chemical resistance.
- ◆ Built-in VV15F-01C basic microswitch, silver alloy contacts plated with 24K gold, CE,UL,C-UL,VDE certified.
- ◆ The built-in microswitch is completely sealed inside the product, so it is oil-proof, water-proof and dust-proof up to IP68.
- ◆ Standardly equipped with RVV 0.5mm<sup>2</sup>x4 cores x2m cable.



## General Characteristics

Material	Flame retardant reinforced engineering plastic nylon
Contact resistance	Below 50mΩ (first time)
Insulation resistance	Above 100MΩ, 500VDC test
Dielectric	2000VAC 1 minute
Mechanical lifespan	Min. 1 million
Electrical lifespan	Min. 100,000
Ambient temperature	-25°C~+70°C (no condensation, no icing)
Ambient Humidity	45%~85%RH
IP rating	IP X8
Standard Certification	CE IEC/EN60947-5-1 GB14048.5 RoSH YY1057-2016

## Dimension and Circuit



## Model Naming

### HRF-M6-1-2 Medical Two Pedals Interlock Foot Switch

#### 1 Connector

None	Standard 2m cable
A	6.35mm audio connector (standard), can be customized with 3.5mm
D	DB9 connector
U	USB connector

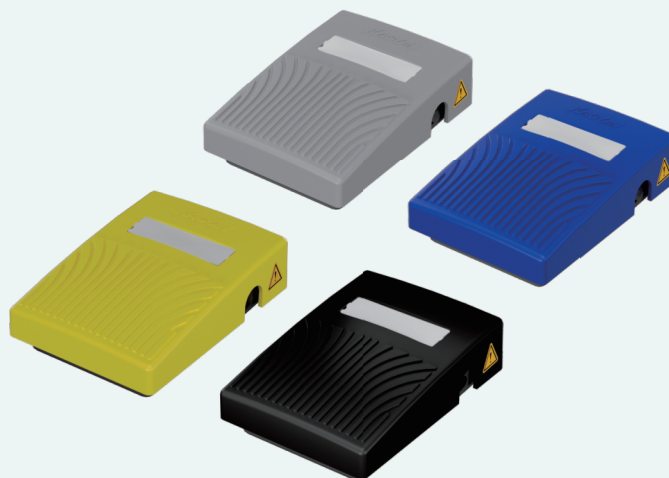
#### 2 Cable

None	0.5mm <sup>2</sup> x 2m (standard)
3	0.5mm <sup>2</sup> x 3m
5	0.5mm <sup>2</sup> x 5m

※The above designations are for selection reference only, and the parameters cannot be combined arbitrarily. Common specifications are shown in the table, if you need special customized specifications, please contact KACON.

## Medical Waterproof Foot Switch

- ◆ Flame retardant reinforced engineering plastic shell, high structural strength, aging resistance, impact resistance, chemical resistance.
- ◆ With embedded marking board, the function codes can be easily marked and are not easy to peel off or lose color.
- ◆ Fatigue-free back pedal structure for long time operation.
- ◆ Oil-, water-, and dust-resistant up to IP68 in accordance with IEC/EN60529.
- ◆ Standardly equipped with RVV 0.5mm<sup>2</sup> x 2 cores x 2m cable.



## General Characteristics

Material	Flame retardant reinforced engineering plastic nylon			
Contact resistance	Below 50mΩ (first time)			
Insulation resistance	Above 100MΩ, 500VDC test			
Dielectric	2000VAC 1 minute			
Mechanical lifespan	Min. 1 million			
Electrical lifespan	Min. 100,000			
Ambient temperature	-25°C~+70°C (no condensation, no icing)			
Ambient Humidity	45%~85%RH			
IP rating	IP X8			
Standard Certification	CE IEC/EN60947-5-1	GB14048.5	RoSH	YY1057-2016

## Model Naming

### HRF-M8 [1] [2] - [3] - [4] Medical Waterproof Foot Switch

#### [1] Connector

None	Single pedal (1a, 2 cores cable)
2	2-pedals (2a, 4 cores cable)
:	:
6	6-pedals

#### [2] Pedal color

Y	Yellow (standard)
R	Red
A	Orange
G	Green
B	Blue
W	White
K	Black

#### [3] Connector

None	No connector (standard)
A	6.35mm audio connector (standard), can be customized with 3.5mm
D	DB9 connector
U	USB connector

#### [4] Cable

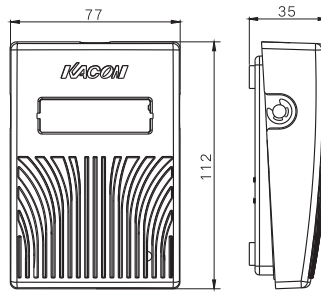
None	0.5mm <sup>2</sup> × 2m (standard)
2	0.5mm <sup>2</sup> × 3m
3	0.5mm <sup>2</sup> × 5m

※standard color: Yellow/blue (left/right)

※The above designations are for selection reference only, and the parameters cannot be combined arbitrarily. Common specifications are shown in the table, if you need special customized specifications, please contact KACON.

## Dimension and Circuit

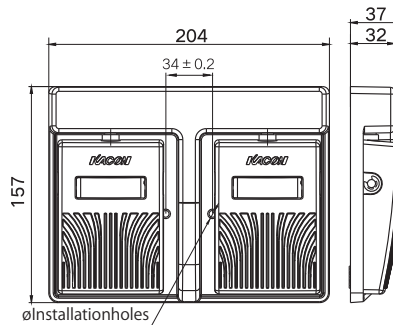
HRF-M8 (standard)



白 COM  
WHITE

NO 红  
RED

HRF-M82 (2-pedals)



(Left)  
COM  
YELLOW

NO  
RED

(right)  
COM  
ORANGE

NO  
GREEN

## Specification type

Model specifications	Form	Built-in switch			Cable	Operation force	Weight (KG)	
		Part number	Contact form	Rated current				
HRF-M8*	Standard	24K gold plated contacts waterproof micro switch	1a	3A 250VAC (Resistance)	RVV 0.5mm <sup>2</sup> × 2cores × 2m grey	≤11	0.359	
HRF-M82*	2-pedals (standard)		1a each					RVV 0.5mm <sup>2</sup> × 4cores × 2m grey
HRF-M8*-A	6.3mm audio connector (customized)		1a		Per customer requirements			
HRF-M82*-A			1a each					
HRF-M8*-D	DB9 connector (customized)		1a					
HRF-M82*-D			1a each					
HRF-M8*-U	USB connector (customized)		1a					
HRF-M82*-U			1a each					